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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/531,545    03/20/00    HAYASHI

A    008651-20023

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IM22/0104

EXAMINER
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DIAMOND, A

ART UNIT	PAPER NUMBER
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1753

DATE MAILED:

01/04/01

*4*

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/531,545

Applicant(s)

HAYASHI ET AL.

Examiner

Alan Diamond

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed June 27, 2000 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Specification***

2. The disclosure is objected to because of the following informalities: On page 39, at line 5, the term "t" should be changed to "to". Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

4. Claims 1 and 5-7 are objected to because of the following informalities: In claim 1, at line 4, the word "a" should be changed to "an". In claim 5, at line 2, the colon should be changed to a semicolon. In claim 6, at line 3, the word "a" should be inserted after "laying". In claim 7, at line 3, the "s" immediately after "laying" should be changed to "a". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite because "said steam barrier member" at lines 13-14 lacks positive antecedent support in claim 4 itself. It is suggested that "said steam barrier member" be changed to "said steam barrier material".

In claim 7, at lines 12-13, the word "then" appears to be incorrect in the phrase "while heating then in a ..."

Claim 7 is indefinite because "the way of curing said encapsulation resin" at lines 15-16 lacks positive antecedent support in claim 7 itself. Furthermore, is not clear exactly what is meant by the term "on the way of curing said encapsulation resin".

Claim 7 is indefinite because "the melt" at line 19 lacks positive antecedent support in claim 7 itself.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hattori et al, U.S. Patent 5,578,142. Note, in particular, the sloped ends of the encapsulation material (17) (see Figure 1B).
9. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Feinberg, U.S. Patent 4,636,578. See Figure 1.
10. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Minning et al, "Thermal and optical performance of encapsulation systems for flat plate photovoltaic modules," Conference Record, 15<sup>th</sup> IEEE Photovoltaic Specialists Conference, Kissimmee, FL, May 12-15, 1981, published Aug. 1981. See Figure 1a.
11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Walker et al, U.S. Patent 4,067,764. See Figures 1-3; and col. 3, lines 15-58.
12. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mori et al, U.S. Patent 5,782,994. See Figures 3 and 4; and col. 15, lines 9-22.
13. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al, U.S. Patent 5,507,880.

Ishikawa et al teaches a solar cell module comprising a transparent glass substrate (20); photovoltaic cells formed on said substrate and comprising a transparent electrode film (30), a semiconductor layer (40), and a back metal electrode (50); an then a passivating resin layer (80) which seals the photovoltaic cells, wherein said passivating resin layer includes a water vapor barrier layer of not more than 1 g/m<sup>2</sup> day measured at a thickness of 100  $\mu$ m (see abstract; the paragraph bridging cols. 2 and 3; Example 1; and Figures 1 and 8). The passivating layer (80) covers both the central

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area and the peripheral area of the rear surface of the photovoltaic cells, and thus, reads on both the instant principal encapsulation material and the instant steam barrier material. Since Ishikawa et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

14. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et al, U.S. Patent 5,252,141.

With reference to Figure 9, the upper transparent substrate (303) of Inoue et al's solar cell module reads on the transparent substrate in instant claim 5 and the substrate in instant claim 1. The solar module additionally includes solar cells (105); filler (302); and a lower substrate (303), which reads on the rear surface encapsulation material in claim 5 (see Figure 9; and col. 7, lines 30-41). The lead-out wire (109) in Figure 9 is drawn to the rear surface of the lower substrate (303), and the filler (302) is not directly exposed to the atmosphere in the section where the lead-out wire is lead out, as per claim 5. Since Inoue et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

***Allowable Subject Matter***

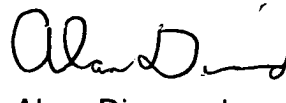
15. Claim 6 would be allowable if rewritten or amended to overcome the objection for informalities set forth in this Office action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 703-308-0840. The examiner can normally be reached on Monday through Friday, 6:30 a.m. to 3:00 p.m. EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 703-308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Alan Diamond  
Primary Examiner  
Art Unit 1753

Alan D. Diamond  
December 5, 2000